



Arsenic in Urine

April 6, 2007

On Monday, February 26th, the Chemical Hazards Program (CHP) received a call from a resident in Tift County, GA and a resident in Brooks County, GA who were both concerned about their laboratory test results for arsenic in their urine. Both had been experiencing headaches. The individual from Tift County described additional symptoms including nausea and vomiting, lack of appetite, diarrhea, stroke-like symptoms on the left side of her body, numbness in her limbs, and sores on her hands and breasts. Both have been working with their doctor to resolve the problem.

The Tift County resident was concerned about health effects from exposure to arsenic in her drinking water via ingestion. When CHP spoke with her, she mentioned that she frequently drank water from the household tap throughout the day, whereas her husband and teen-age daughter did not drink water from home. The resident works in insurance sales and does not have outdoor hobbies. When asked, she said that she does not eat much seafood (about once per month), and does not take herbal supplements. The concerned resident faxed CHP her test results from a diagnostic lab in Valdosta, GA, which showed levels of arsenic in urine at twice the level of what is considered the normal range in one liter of urine. She also had levels higher than what is considered the normal range for excretion of total arsenic in one day. CHP recommended that if she was concerned about her community well, she should talk to her neighbors about any potential symptoms they may be having.

CHP received the Tift County resident's retest results on February 27th, and spoke to her on March 1st. She mentioned that her family was being tested for arsenic in urine, and that she and her husband are having their tap water sampled for arsenic. However, she had not spoken to her neighbors. CHP spoke to the resident's husband on March 7th. He stated that the water testing results were negative and that he was currently working with the USDA and with the UGA Cooperative Extension Service to further investigate potential sources. CHP let him know that based on given descriptions and the water testing results, there was no visible environmental exposure pathway. However, if he was concerned about

poisoning he can contact the Georgia Poison Control Center. He was also advised to continue working with his doctor, and if he is concerned about intentional poisoning, he should contact the police.

CHP also spoke with a Brooks County resident on February 26th regarding his concern about arsenic exposure in his living environment, including inhalation of arsenic contaminated dust from the land's previous use as a farm. He had his water well checked, and there was no arsenic in his drinking water. When asked, the resident said that he and his family do not smoke, do not use outdated pesticides for ordinary household pest control, and that they enjoy fish dinners at Captain D's about once a week. His pest control practices and the use of pyrethrins and D-Con pest control paste were also discussed.

The Brooks County resident faxed CHP his test results from a diagnostic lab in Valdosta, GA, which showed levels of total arsenic in urine above the level of what is considered the normal range for excretion of arsenic in one day. However, his levels were not higher than what is considered the normal range in one liter of urine. CHP spoke with the resident on March 7th and he mentioned that he spoke with an employee about pharmacokinetics and speciation of arsenic on March 5th.

An environmental exposure pathway, other than seafood for the resident and his family, was not found. CHP recommended that the resident continue to work with his doctor and that he not eat seafood for several days before being retested. It was further recommended that if he was concerned about his soil, that he makes sure to wash his hands and clothes after working in the garden. CHP then spoke with the employee about his conversation with the resident, who made it aware of his recommendations to resample the well and not eat seafood for at least two weeks.

CHP searched the Georgia Environmental Protection Hazardous Site Inventory for hazardous waste sites, in Tift and Brooks County, and discovered that there were no hazardous waste sites within a mile of either home.